

Serial No. 09/838,376

Steven Edward Atkin

Page 2 of 14

Section I:
AMENDMENT UNDER 37 CFR §1.121 to the
CLAIMS

Claim 1 (currently amended):

A method for providing metadata within a ~~Unicode character streams~~ stream ~~said metadata describing information necessary for accurate display rendering of the character stream;~~ said method comprising the steps of:

encoding into one or more metatags information regarding display rendering for at least one character in a Unicode character stream;

inserting ~~one or more~~ said metatags into ~~[[a]]~~ said Unicode character stream by spelling ~~[[the]]~~ at least one tag identifier; and

inserting ~~[[a]]~~ one or more metatag separator characters between adjacent multiple metatags if more than one metatag has been inserted without Unicode intervening between adjacent metatags, ~~so as to create thereby producing~~ a modified Unicode character stream having separator-delimited metadata embedded within it.

Claim 2 (original):

The method as set forth in Claim 1 further comprising the steps of:

inserting one or more parameters following at least one metatag with which it is associated; and

inserting a parameter separator between multiple parameters associated with a metatag if more than one parameter has been inserted so as to create a separator-delimited parameter list following a metatag.

Serial No. 09/838,376

Steven Edward Atkin

Page 3 of 14

Claim 3 (currently amended):

The method as set forth in Claim 1 wherein said step of inserting one or more metatags into a Unicode character stream comprises inserting an element metatag which describes zero width joiner and zero width non joiner characters, such that multiple characters may be grouped together for treatment as a single grapheme or text element.

Claim 4 (original):

The method as set forth in Claim 2 wherein said step of inserting one or more metatags comprises inserting a paragraph metatag, and wherein said step of inserting one or more parameters comprises inserting a right-to-left or a left-to-right directional parameter following a paragraph metatag which indicate a direction in which the character stream following the paragraph metatag and parameter is to be rendered for display.

Claim 5 (original):

The method as set forth in Claim 2 wherein said step of inserting one or more metatags comprises inserting a direction metatag, and wherein said step of inserting one or more parameters comprises inserting a right-to-left or a left-to-right directional parameter following a direction metatag which indicate a direction in which the character stream following the direction metatag and parameter is to be rendered for display.

Claim 6 (original):

The method as set forth in Claim 5 wherein said steps of inserting one or more metatags and inserting one or more parameters following metatags comprise the steps of replacing hyper text markup language bi-directional output (BDO) tags with said direction metatags and directional parameters.

Serial No. 09/838,376

Steven Edward Atkin

Page 4 of 14

Claim 7 (original):

The method as set forth in Claim 2 wherein said step of inserting one or more metatags comprises inserting a mirror metatag which indicates the characters following the mirror metatag is to be presented in mirror fashion.

Claim 8 (original):

The method as set forth in Claim 2 wherein said step of inserting one or more metatags comprises inserting a math metatag and a language metatag such that portions of the character stream which represent mathematical expressions are delimited from portions of the character stream which represent language.

Claim 9 (original):

A computer readable medium encoded with software causing a computer to perform the following actions for embedding display rendering metadata into character streams:

encode into one or more metatags information regarding display rendering for at least one character in a Unicode character stream;

insert ~~one or more~~ said metatags into ~~[[a]]~~ said Unicode character stream by spelling ~~[[the]]~~ at least one tag identifier; and

insert ~~[[a]]~~ one or more metatag separator characters between adjacent multiple metatags if more than one metatag has been inserted without Unicode intervening between adjacent metatags, ~~so as to create~~ thereby producing a modified Unicode character stream having separator-delimited metadata embedded within it.

Serial No. 09/838,376

Steven Edward Atkin

Page 5 of 14

Claim 10 (original):

The computer readable medium as set forth in Claim 9 further comprising software for performing the following actions:

insert one or more parameters following at least one metatag with which it is associated; and

insert a parameter separator between multiple parameters associated with a metatag if more than one parameter has been inserted so as to create a separator-delimited parameter list following a metatag.

Claim 11 (original):

The computer readable medium as set forth in Claim 9 wherein said software for inserting one or more metatags into a Unicode character stream comprises software for inserting an element metatag describes zero width joiner and zero width non joiner characters, such that multiple characters may be grouped together for treatment as a single grapheme or text element.

Claim 12 (original):

The computer readable medium as set forth in Claim 10 wherein said software for inserting one or more metatags comprises software for inserting a paragraph metatag, and wherein said software for inserting one or more parameters comprises software for inserting a right-to-left or a left-to-right directional parameter following a paragraph metatag which indicate a direction in which the character stream following the paragraph metatag and parameter is to be rendered for display.

Serial No. 09/838,376

Steven Edward Atkin

Page 6 of 14

Claim 13 (original):

The computer readable medium as set forth in Claim 10 wherein said software for inserting one or more metatags comprises software for inserting a direction metatag, and wherein said software for inserting one or more parameters comprises software for inserting a right-to-left or a left-to-right directional parameter following a direction metatag which indicate a direction in which the character stream following the direction metatag and parameter is to be rendered for display.

Claim 14 (original):

The computer readable medium as set forth in Claim 13 wherein said software for inserting one or more metatags and inserting one or more parameters following metatags comprise software for replacing hyper text markup language bi-directional output (BDO) tags with said direction metatags and directional parameters.

Claim 15 (original):

The computer readable medium as set forth in Claim 9 wherein said software for inserting one or more metatags comprises software for inserting a mirror metatag which indicates the characters following the mirror metatag is to be presented in mirror fashion.

Claim 16 (original):

The computer readable medium as set forth in Claim 9 wherein said software for inserting one or more metatags comprises software for inserting a math metatag and a language metatag such that portions of the character stream which represent mathematical expressions are delimited from portions of the character stream which represent language.

Serial No. 09/838,376

Steven Edward Atkin

Page 7 of 14

Claim 17 (currently amended):

A system for embedding metadata within a Unicode character stream, ~~said metadata describing information necessary for accurate display rendering of the character stream;~~
said system comprising:

an encoder for encoding into one or more metatags information regarding display rendering for at least one character in a Unicode character stream;

a metatag inserter for inserting ~~one or more~~ said metatags into ~~[[a]]~~ said Unicode character stream by spelling ~~[[the]]~~ at least one tag identifier; and

a tag separator inserter for inserting ~~[[a]]~~ one or more metatag separator characters between ~~multiple adjacent~~ metatags if more than one metatag has been inserted without Unicode intervening between adjacent metatags, which creates thereby producing a modified Unicode character stream having separator-delimited metadata embedded within it.

Claim 18 (original):

The system as set forth in Claim 17 further comprising:

a parameter inserter for inserting one or more parameters following at least one metatag with which it is associated; and

a parameter separator inserter for inserting a parameter separator between multiple parameters associated with a metatag if more than one parameter has been inserted, which creates a separator-delimited parameter list following a metatag.

Claim 19 (original):

The system as set forth in Claim 17 wherein said metatag inserter is adapted to insert an element metatag which describes zero width joiner and zero width non joiner characters, such that multiple characters may be grouped together for treatment as a single grapheme or text element.

Serial No. 09/838,376

Steven Edward Atkin

Page 8 of 14

Claim 20 (original):

The system as set forth in Claim 18 wherein said metatag inserter is adapted to insert a paragraph metatag, and wherein said parameter inserter is adapted to insert a right-to-left or a left-to-right directional parameter following a paragraph metatag which indicate a direction in which the character stream following the paragraph metatag and parameter is to be rendered for display.

Claim 21 (original):

The system as set forth in Claim 18 wherein said metatag inserter is adapted to insert a direction metatag, and wherein said parameter inserter is adapted to insert a right-to-left or a left-to-right directional parameter following a direction metatag which indicate a direction in which the character stream following the direction metatag and parameter is to be rendered for display.

Claim 22 (original):

The system as set forth in Claim 21 wherein said metatag inserter and said parameter inserter are adapted to replace hyper text markup language bi-directional output (BDO) tags with said direction metatags and directional parameters.

Claim 23 (original):

The system as set forth in Claim 18 wherein said metatag inserter is adapted to insert a mirror metatag which indicates the characters following the mirror metatag is to be presented in mirror fashion.

Claim 24 (original):

The system as set forth in Claim 18 wherein said metatag inserter is adapted to insert a math metatag and a language metatag such that portions of the character stream which represent mathematical expressions are delimited from portions of the character stream which represent language.